

AMENDMENTS TO THE CLAIMS:

1. (currently amended) A seed of sunflower inbred line designated H1063R, representative seed of said line having been deposited under ATCC Accession No. PTA-6657.
2. (previously presented) A sunflower plant, or a part thereof, produced by growing the seed of claim 1.
3. (original) Pollen of the plant of claim 2.
4. (original) An ovule of the plant of claim 2.
5. (previously presented) A sunflower plant, or a part thereof, having all of the physiological and morphological characteristics of the sunflower plant of claim 2.
6. (original) A tissue culture of regenerable cells from the sunflower plant of claim 2.
7. (previously presented) The tissue culture according to claim 6, wherein a cell or protoplast of the tissue culture is produced from a plant part selected from the group consisting of leaves, pollen, embryos, roots, root tips, anthers, flowers, and stalks.
8. (currently amended) A sunflower plant regenerated from the tissue culture of claim 6, wherein the regenerated plant has all of the morphological and physiological characteristics of inbred line H1063R, representative seed of said line H1063R having been deposited under ATCC Accession No. PTA-6657.
9. (previously presented) A sunflower plant with all of physiological and morphological characteristics of inbred line H1063R, wherein said sunflower plant is produced by a tissue culture process using the sunflower plant of claim 5 as the starting material for said process.

10. (previously presented) A method of producing a hybrid sunflower seed, wherein said method comprises crossing a first inbred parent sunflower plant with a second inbred parent sunflower plant and harvesting the resultant hybrid sunflower seed, wherein said first inbred parent sunflower plant or said second inbred parent sunflower plant is the sunflower plant of claim 2.

11. (previously presented) A method for producing a male-sterile sunflower plant comprising transforming the sunflower plant of claim 2 with a nucleic acid molecule that confers male sterility.

12. (previously presented) A male sterile sunflower plant produced by the method of claim 33.

13. (previously presented) A method of producing an herbicide resistant sunflower plant comprising transforming the sunflower plant of claim 2 with a transgene that confers herbicide resistance.

14. (previously presented) An herbicide resistant sunflower plant produced by the method of claim 35.

15. (previously presented) The sunflower plant of claim 14, wherein the transgene confers resistance to an herbicide selected from the group consisting of imidazolinone, sulfonylurea, glyphosate, glufosinate, L-phosphinothricin, triazine and benzonitrile.

16. (previously presented) A method of producing an insect resistant sunflower plant comprising transforming the sunflower plant of claim 2 with a transgene that confers insect resistance.

17. (previously presented) An insect resistant sunflower plant produced by the method of claim 16.

18. (previously presented) The sunflower of claim 17, wherein the transgene encodes a *Bacillus thuringiensis* endotoxin.

19. (previously presented) A method of producing a disease resistant sunflower plant comprising transforming the sunflower plant of claim 2 with a transgene that confers disease resistance.

20. (previously presented) A disease resistant sunflower plant produced by the method of claim 19.

21. (currently amended) A method of introducing a desired trait into sunflower inbred line H1063R, wherein the method comprises:

(a) crossing H1063R plants grown from H1063R seed, representative seed of which has been deposited under ATCC Accession No. PTA-6657, with plants of another sunflower line that comprise a desired trait to produce progeny plants, wherein the desired trait is selected from the group consisting of male sterility, herbicide resistance, insect resistance, disease resistance and oil content;

(b) selecting progeny plants that have the desired trait to produce selected plants;

(c) crossing the selected progeny plants with the H1063R plants to produce backcross progeny plants:

(d) selecting for backcross progeny plants that have the desired trait and physiological and morphological characteristics of sunflower inbred line H1063R to produce selected backcross progeny plants; and

(e) repeating steps c) and (d) two or more times in succession to produce selected third or higher backcross progeny plants that comprise the desired trait and all of the physiological and morphological characteristics of sunflower inbred line H1063R listed in Table 1.